

**World Top 100 PCB Makers in 1998 (Exchange rates are those in 1998, 2006 & 2007)**

Rank	Makers	Nationality	1998	2006	2007(E)	Comments
1	CMK Corporation	Japan	1031	1.068	1.215	Once SSB King, now jack of all trades
2	Viasystems Group Inc	USA	980	507	490	Shut down many plants, Kalex surviving
3	Ibiden Co Ltd	Japan	980	1.783	1.794	2007 would be \$1,938M in 2008 Exchange
4	Hadco	USA	765	na	na	Sold to Sanmina, which became S-SCI
5	Nippon Mektron	Japan	660	1.174	1.295	\$1,620M inclusive of FPCA revenue
6	Hitachi Chem	Japan	582	520	526	Japan, Taiwan & Singapore
7	Compeq Mfg	Taiwan	547	706	670	Hit by Motorola glitch
8	Shinko Electric Industry	Japan	478	1.037	1.017	IC Substrate only
9	Mitsubishi Gas Chemical	Japan	424	292	326	Japan, Taiwan & China
10	Matsushita Electronic	Japan	409	370	387	"Panasonic Electronic Devices (PED)"
11	Johnson Matthey	USA	405	na	na	Chippewa Falls is TTM, Others closed
12	Photocircuits Corp	USA	380	73	23	Shut down in 2007
13	Fujitsu	Japan	364	258	272	Fujitsu Interconnect Technologies
14	Nanya PCB	Taiwan	359	1.099	1.236	IC Substrate
15	DII (Multek)	USA	340	na	na	Merged with Astron → Multek
16	IBM Group	USA	320	na	na	Japan → Kyocera SLC, US → EIT
17	Daeduck Group	S. Korea	317	651	618	Koea, Philippines and China
18	DDi	USA	290	174	181	Sold all UK plants and EMS business
19	NEC	Japan	275	na	na	Merged with Toppan (Toppan-NEC)
20	Tyco PCB	USA	270	na	na	Merged with TTM Technologies
21	Wus PCB	Taiwan	264	580	509	China plant is for high layer-count MLB
22	Sanmina	USA	250	515	415	Sanmina-SCI Shut down Phoenix & Karls.
23	Toppan Electronics	Japan	236	390	421	Toppan-NEC (60% Toppan, 40% NEC)
24	Ruwel AG	Germany	236	205	210	→ Mr. Zevens → Bear Sterns → JP Morgan
25	Elec & Eltek	HKG	233	460	490	Absorbed into Kingboard Chemical Group
26	Daisho Denshi	Japan	220	260	300	IC Substrate and Flex-Rigid
27	Aspocomp	Finland	220	60	59	Sold main share to Meadville Group
28	Sony Group	Japan	217	230	240	Sony Chemical
29	Praegitzer Ind	USA	207	na	na	Oregon sold to Tyco → TTM & closed
30	AT&S	Austria	207	584	670	Bought Siemens Augsburg and closed it
31	Samsung E-M	S. Korea	203	1.187	1.272	IC substrate and HDI
32	Fujikura	Japan	200	626	630	FPC and FPCA
33	Termbray/Kalex	HKG	190	na	na	Sold to Viasystems
34	Korea Circuit	S. Korea	188	na	na	Sold to Young Poong Group
35	Airex	Japan	186	38	na	Sold to Tokyo Computer then to Kyoden
36	LG Electronics	S. Korea	179	574	667	Now, a part of LG Micron
37	Gold Circuit	Taiwan	172	480	610	Taiwan for High layer count, China NB
38	Wong Circuit	HKG	170	na	na	Sold to UBS (EPC) then to Merix
39	Yamamoto Mfg	Japan	165	130	122	High layer-count and proto in China
40	OPC	HKG	165	350	530	"Meadville Technology Group"
41	Nippon Elec	Japan	157	na	na	Sold to Kyoden
42	Alcatel	France	156	na	na	French operation surviving as Elvia
43	Sumitomo Denko	Japan	156	280	360	changed to Sumitomo Printed Circuit
44	Fuba/Vogt	Germany	154	100	116	50% owned by Fuba Tunisie
45	Unicap	Taiwan	148	na	na	Bankrupted, China plant sold to J-3
46	Unitech	Tawan	147	370	413	Into solar panel business
47	Merix	USA	138	400	400	Bought Eastern Pacific Circuit

48	Hitachi Ltd	Japan	127	50	52	changed to "Hitachi PWB Solutions"
49	STP	Germany	125	na	na	old German IBM, now closed
50	World Wiser El	Taiwan	123	1.250	1.510	changed to "Unimicron Technology"
51	Shinko Mfg	Japan	121	161	170	Owned by Sumitomo Mining
52	Sharp Corp	Japan	121	65	60	Continues to decline
53	Sanwa Electric Group	Japan	120	105	105	"Sanwa Eletronic Circuit"
54	Chin Poon	Taiwan	120	302	364	New plant in China & Taiwan
55	Automata	USA	118	na	na	DDi Virginia
56	Itabashi Seiki	Japan	115	105	105	Japan and Philippines
57	Canon Comp.	Japan	113	na	na	Shut down
58	Hokuriku Denko	Japan	113	50	40	Malaysia for silver-through-hole boards
59	Elna	Japan	113	205	226	Japan and Malaysia
60	Top Search	HKG	110	225	210	Reorganizing
61	Shirai Denshi	Japan	108	225	258	New plant under construction in Zhuhai
62	KCE	Thailand	108	190	258	More than 50% for automotive
63	Schweizer Electronics	Germany	107	75	110	\$110M at \$1.4/€ Exchange rate
64	Fujikiko Denshi	Japan	107	na	na	Sold to Kyoden
65	Meiko	Japan	106	516	680	\$350M investment in Vietnam
66	Eastern Co	Japan	102	172	195	IC Substrate specialist
67	Nitto Denko	Japan	100	422	424	FPC in Japan, Vietnam & China
68	Eurocir	Spain	100	100	100	Half of revenue is re-sale from China
69	Isu	S. Korea	100	198	230	changed to "Isu-Petasys"> Exaboard
70	Yamanashi Matsushita	Japan	96	90	92	Merged with Panasonic Electronic Device
71	Philips PCB	Netherland	94	na	na	All but Austrian plant shut down (AT&S)
72	Gul Technologies	Singapore	92	116	145	Two plants in China, Singapore shut down
73	Kyoden	Japan	91	326	350	Hard company to understand
74	Pentex-Schweizer	Singapore	89	na	na	Sold to Sanmina-SCI, S'pore & Wuxi
75	Toshiba	Japan	86	na	na	Sold to Dainippon Printing
76	NCI	Japan	86	42	65	SSB & DSB for automotive
77	Simmtch	S. Korea	84	306	380	Memory modules & IC Substrates
78	SSK Limited	Japan	82	na	na	Bankrupted
79	Viktron	USA	80	na	na	Bankrupted
80	Astron Group	HKG	80	na	na	Core of Multek
81	Prestwick	UK	80	na	na	Shut down
82	Sakai Denshi	Japan	79	80	84	Japan and Vietnam for FPC
83	Microser SA	Spain	78	na	na	Sold twice (Tyco & a Bank) Shut down
84	Pacific Circuit	USA	78	na	na	TTM Technologies (Birlington shut down)
85	Circuit Systems	USA	77	na	na	Bankrupted,seems to be surviving in India
86	Kyosha	Japan	76	138	156	SSB king today
87	Bureau of Engraving	USA	75	na	na	Bankrupted
88	MMM-3M	USA	75	400	320	Shut down US & Japanese plants
89	Cire Group	France	70	90	90	Stagnant
90	Litton ACD	USA	70	na	na	Shut down
91	Photo Print Electronics	Germany	68	na	na	Shut down French plant & sold to Würth
92	Hirayama Engraving	Japan	68	30	25	NEC dependence was a mistake
93	Yamanashi Avio	Japan	68	35	35	Defense
94	Toei Denshi	Japan	68	na	na	Sold to Kyoden
95	Sumitomo Bakelite	Japan	68	200	170	Shut down Japan and only in Vietnam
96	Aika Denki	Japan	67	70	75	

97	Parlex	USA	67	na	na	Sold to Johnson Electric (no longer USA)
98	Freudenberg-Mektec	Germany	66	na	na	A part of Nippon Mektron today
99	Ya Hsin	Taiwan	66	20	na	Bankrupted
100	ADFlex Solution	USA	65	na	na	Sold to Innovex and shut down
	Total		20.206	23.890	25.568	Growth despite a number of closures

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**NTI-100 World Top PCB Makers in 2016 (unit: US\$ Million)**

Rank	Maker	Country	2015 Rev	2016 Rev	Growth	Local Name
1	Nippon Mektron*	Japan	3.800	3.402	-10,5%	日本メクトロン
2	ZD Tech*	Taiwan	2.658	2.546	-4,5%	臻鼎科技
3	TTM Technologies	U.S.A	2.450	2.533	3,4%	TTM
4	Unimicron	Taiwan	2.177	1.942	-3,1%	欣興電子
5	Compeq	Taiwan	1.376	1.411	2,6%	華通電腦
6	Tripod	Taiwan	1.345	1.349	0,3%	健鼎科技
7	Young Poong Group*	S.Korea	1.295	1.220	-5,8%	영풍그룹
8	Sumitomo Denko*	Japan	1.673	1.142	-46,5%	住友電工
9	Samsung E-M	S.Korea	1.331	1.134	-14,8%	삼성전기
10	<b>KBC PCB Group</b>	<b>China</b>	<b>881</b>	<b>980</b>	<b>11,2%</b>	<b>建滔化工集團</b>
11	Ibiden	Japan	1.372	920	-33,0%	イビデン
12	Nanya PCB	Taiwan	927	909	-2,5%	南亞電路
13	AT&S	Austria	844	901	6,8%	AT&S
14	Meiko	Japan	884	890	0,7%	メイコー
15	Fujikura*	Japan	902	868	-3,8%	フジクラ
16	HannStar	Taiwan	1.253	827	-34,0%	瀚宇博德
17	Daeduck Group	S.Korea	853	793	-7,0%	대덕전자
18	T.P.T.	Taiwan	696	769	10,5%	志超科技
19	Shinko Denski	Japan	741	757	2,2%	新光電氣
20	Chin Poon	Taiwan	705	742	5,2%	敬鵬工業
21	Wus Group	Taiwan	661	723	9,4%	滬士電子
22	Kinsus	Taiwan	715	718	0,4%	景碩科技
23	CMK	Japan	678	699	3,1%	日本シーエムケイ
24	<b>Shennan Circuit</b>	<b>China</b>	<b>535</b>	<b>693</b>	<b>29,5%</b>	<b>深南電路</b>
25	Simmtech	S.Korea	646	690	6,8%	심텍
26	LG Innotek	S.Korea	609	683	12,2%	LG이노텍
27	Gold Circuit	Taiwan	593	604	1,9%	金像電子
28	Multek	U.S.A	730	600	-17,8%	Multek
29	Flexium*	Taiwan	562	592	5,3%	台群科技
30	Kyocera PCB	Japan	600	550	-8,3%	京セラ
31	<b>Mflex (Dongshan Prec)*</b>	<b>China</b>	<b>637</b>	<b>522</b>	<b>-18,1%</b>	<b>蘇州東山精密</b>
32	<b>Kinwong</b>	<b>China</b>	<b>404</b>	<b>495</b>	<b>22,5%</b>	<b>景旺電子</b>
33	Isu-Petasys	S.Korea	460	478	3,9%	이수페타시스
34	SI Flex*	S.Korea	354	453	28,0%	에스아이플렉스
35	<b>SZ Fast Print</b>	<b>China</b>	<b>319</b>	<b>443</b>	<b>38,9%</b>	<b>深圳興森快捷</b>
36	<b>Ellington</b>	<b>China</b>	<b>441</b>	<b>442</b>	<b>0,2%</b>	<b>依賴頓</b>
37	Career*	Taiwan	488	432	-11,5%	嘉聯益科技
38	<b>Founder Tech</b>	<b>China</b>	<b>367</b>	<b>413</b>	<b>12,5%</b>	<b>方正科技</b>
39	Kyoden	Japan	376	405	7,7%	キヨーデン
40	Nitto Denko*	Japan	478	398	-16,7%	日東電工
41	Unitech	Taiwan	428	392	-8,4%	熠華電子
42	KCE Electronics	Thailand	340	382	12,4%	KCE Electronics
43	Dynamic	Taiwan	345	366	6,1%	定穎電子
44	Palwonn	Taiwan	261	350	34,1%	競華、昱鑫
45	<b>SZ Suntak</b>	<b>China</b>	<b>265</b>	<b>339</b>	<b>27,9%</b>	<b>深圳崇達電子</b>
46	Hitachi Chemical	Japan	342	336	-2,0%	日立化成
47	Sanmina	U.S.A	330	330	0,0%	Sanmina Corp

48	CCTC	China	302	324	7,4%	汕頭超声科技
49	Wuzhou	China	323	323	0,0%	五株科技
50	BH Flex*	S.Korea	314	321	2,2%	베에이치플렉스
51	3CEMS	Taiwan	316	310	-1,9%	三希科技 ( 广大 )
52	Redboard	China	258	301	16,7%	紅板
53	Guangdong Xinda	China	278	290	4,3%	廣東興達
54	Victory Giant	China	194	274	41,2%	勝宏科技
55	APEX	Taiwan	268	266	-0,4%	APEX
56	APCB	Taiwan	242	266	10,0%	競国実業
57	DG Shengyi Electronics	China	220	260	18,2%	東莞生益電子
58	Gul Technologies	Singapore	274	260	-5,1%	Gul Technologies
59	ASE	Taiwan	261	258	-1,1%	日月光
60	Fujitsu	Japan	278	250	-10,1%	富士通
61	Shirai Denshi	Japan	262	250	-4,6%	シライ電子
62	Olympic	China	202	243	20,3%	廣東世運電路
63	Boardtek	Taiwan	240	227	-5,4%	先豐科技
64	Sun & Lynn	China	205	225	9,8%	深圳深聯電子
65	DAP	S.Korea	221	214	-3,2%	디에이피
66	Bomin	China	170	204	20,0%	博敏電子
67	STEMCO (COF)*	S.Korea	194	202	4,1%	스텝코
68	Aoshikan	China	159	198	24,5%	奧士康電子
69	Kunshan Huaxing	China	193	198	2,6%	昆山華新電子集團
70	Ichia*	Taiwan	233	188	-19,3%	毅嘉科技
71	Kyosha	Japan	180	180	0,0%	京写
72	Daisho Denshi	Japan	173	178	2,9%	大昌電子
73	MGC	Japan	220	174	-20,9%	三菱ガス化学
74	Liang Dar	Taiwan	165	167	1,2%	良達科技
75	MFS*	Singapore	167	160	-4,2%	MFS
76	Xiamen Hongxin*	China	141	158	12,1%	廈門弘信電子科技
77	BYD*	China	118	158	33,9%	深圳比亞迪電子
78	Guangdong Chaohua	China	158	156	-1,3%	廣東超華科技
79	Elna	Japan	162	149	-8,7%	エルナ
80	OKI PCB Group	Japan	136	148	8,8%	沖電気
81	Würth Elektronik	Germany	137	140	2,2%	Würth Elektronik
82	Guangzhou Kingshine	China	121	145	19,8%	廣州科翔電子科技
83	Huading Group	China	139	141	1,4%	華鼎集團
84	3Win Group	China	133	140	5,3%	統贏集團
85	Somacis	Italy	128	137	7,0%	Somacis
86	KS Wanzhen PCB	China	105	131	24,8%	昆山万正電路板
87	Tigerbuilder	China	161	130	-19,3%	悦虎電子
88	Ji'An Mankun	China	109	130	19,3%	吉安滿坤科技
89	Amphenol PCB Div	U.S.A	110	130	18,2%	Amphenol
90	Schweizer	Germany	127	128	0,8%	Schweizer Electronics
91	Sun Ta Electrtronics*	China	106	126	18,9%	上達電子
92	Suzhou Forein FPC*	China	79	123	55,7%	蘇州福萊盈電子
93	Shenzhen Sunshine	China	97	123	26,8%	深圳明陽電路科技
94	Guangzhou Jun Ya	China	87	121	39,1%	廣州駿垂電子科技
95	SZ Jove Enterprise	China	107	120	13,1%	深圳市中富電路
96	CEE PCB	China	87	120	37,9%	惠州中京電子科技
97	Changzhou Haihong	China	103	114	10,7%	常州海弘/澳弘電子

98	JS Kingsun PCB*	China	77	113	46,8%	珠海金順電子科技
99	SZ Shinwu	China	106	112	5,7%	蘇州新武
100	Kunshan Hua Zhu	China	98	110	12,2%	昆山華濤電子
101	Guangzhou GCI	China	108	109	0,9%	廣州杰賽科技
102	New Flex*	S.Korea	103	108	4,9%	뉴플렉스
103	King Brother	China	102	108	5,9%	金百澤科技
104	AKM	China	82	107	30,5%	安捷利 ( 番寓 )
105	Netron Soft Tech*	China	102	107	4,9%	奈電軟性科技電子
106	Yamamoto Mfg	Japan	119	106	-10,9%	山本製作所
107	Seil Electronics	S.Korea	138	105	-23,9%	세일전자
108	Jiangsu Suhan	China	95	105	10,5%	江蘇蘇杭電子
109	Cosmotech	S.Korea	110	103	6,4%	코스모텍
110	Hyunwoo	S.Korea	92	103	12,0%	현우
111	HT Electronics	China	97	101	4,1%	河通電子
112	Mutual Tceh	Taiwan	98	100	2,0%	相互科技
113	ACCESS	China	49	100	104,1%	越亞封裝基板技術
	<b>Top Total</b>		<b>51.866</b>	<b>50.939</b>	<b>-2,1%</b>	

\* Majorly FPC

(N.T. Information Ltd)